ABSTRACT OF THE DISCLOSURE

An electrical detection system and method using an array of conductive sense sites within a sensing substrate for electrically detecting the successful hybridization or binding reaction between two chemical substances, particularly between biogenic substances such as nucleotides, proteins and ligands, and antigens and antibodies. The method and apparatus provide a an inexpensive, robust, small, repeatable, and intuitively easy to use apparatus for detection of low levels of hybridization with large numbers of closely spaced conductive sense sites within a single substrate.